

Applicants: Howard J. Worman and Naoto Mamiya
Serial No.: 09/407,430
Filed : September 29, 1999
Page: 2

~~79. A method of inhibiting the attachment of hepatitis C~~
virus onto a cell, which comprises

contacting the cell with an effective amount of a compound which inhibits the binding of hepatitis C virus envelope E2 protein to a cellular protein associated with hepatitis C virus attachment onto cells identified by a the steps of:

- (X)
- a) incubating said compound, the hepatitis C virus envelope E2 protein or its variant and said cellular protein capable of specifically binding to said hepatitis C virus E2 protein under suitable reaction conditions,
 - b) determining the interactions between the hepatitis C virus envelope E2 protein or its variant and said cellular protein in the presence of said compound, and
 - c) comparing the interactions in step (b) with the interaction between the hepatitis C virus envelope E2 protein or its variant and said cellular protein in the absence of said compound so as to identify a compound which inhibits the binding of hepatitis C virus envelope E2 protein to the cellular protein.

80. The method of claim 79, wherein the cellular protein comprises Eo protein or its variant.

Applicants: Howard J. Worman and Naoto Mamiya
Serial No.: 09/407,430
Filed : September 29, 1999
Page: 3

- (X)
81. The method of claim 80, wherein the Eo protein comprises the amino acid sequence set forth in SEQ ID NO: 1.
 82. The method of claim 80, wherein the variant of Eo protein comprises 120 amino acids set forth in SEQ ID NO:1.
 83. The method of claim 80, wherein the variant of Eo protein comprises Eol having amino acids 1-120 set forth in SEQ ID NO:1.
 84. The method of claim 79, wherein the hepatitis C virus envelope E2 protein comprises the amino acid sequence set forth in SEQ ID NO:2.
 85. The method of claim 79, wherein the variant of hepatitis C virus envelope E2 protein comprises 254 amino acids set forth in SEQ ID NO:2.
 86. The method of claim 79, wherein the variant of hepatitis C virus envelope E2 protein comprises amino acid sequence set forth in SEQ ID NO:2.
 87. The method of claim 79, wherein the compound is not previously known.
 88. The method of claim 79, wherein the cells are liver cells.
 89. The method of claim 88, wherein the liver cells are human liver cells.

Applicants: Howard J. Worman and Naoto Mamiya
Serial No.: 09/407,430
Filed : September 29, 1999
Page: 4

90. A method of preventing the infection of a cell by a hepatitis C virus, which comprises

contacting the cell with an effective amount of a compound which inhibits the binding of hepatitis C virus envelope E2 protein to a cellular protein associated with hepatitis C virus attachment onto cells identified by a the steps of:

- K
- a) incubating said compound, the hepatitis C virus envelope E2 protein or its variant and said cellular protein capable of specifically binding to said hepatitis C virus E2 protein under suitable reaction conditions,
 - b) determining the interactions between the hepatitis C virus envelope E2 protein or its variant and said cellular protein in the presence of said compound, and
 - c) comparing the interactions in step (b) with the interaction between the hepatitis C virus envelope E2 protein or its variant and said cellular protein in the absence of said compound so as to identify a compound which can be used for treating or preventing hepatitis C infection.

91. The method of claim 90, wherein the cellular protein comprises Eo protein or its variant.

Applicants: Howard J. Worman and Naoto Mamiya
Serial No.: 09/407,430
Filed : September 29, 1999
Page: 5

92. The method of claim 91, wherein the Eo protein comprises the amino acid sequence set forth in SEQ ID NO:1.
93. The method of claim 91, wherein the variant of Eo protein comprises 120 amino acids set forth in SEQ ID NO:1.
94. The method of claim 91, wherein the variant of Eo protein comprises Eol protein having amino acids 1-120 set forth in SEQ ID NO:1.
- Fi*
Case 94 95. The method of claim 90, wherein the hepatitis C virus envelope E2 protein comprises the amino acid sequence set forth in SEQ ID NO:2.
96. The method of claim 90, wherein the variant of the hepatitis C virus envelope E2 protein comprises 254 amino acids of set forth in SEQ ID NO:2.
97. The method of claim 90, wherein the variant of the hepatitis C virus envelope E2 protein comprises the amino acid sequence set forth in SEQ ID NO:3.
98. The method of claim 90, wherein the compound is not previously known.
99. The method of claim 90, wherein the cells are liver cells .
100. The method of claim 99, wherein the liver cells are human liver cells.
-